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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,007	04/01/2004	Alexander W. Roesler	SD7332/S100398	1588

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SANDIA CORPORATION  
P O BOX 5800  
MS-0161  
ALBUQUERQUE, NM 87185-0161

EXAMINER
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TUGBANG, ANTHONY D

ART UNIT	PAPER NUMBER
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3729

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
2 MONTHS	02/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/817,007

Applicant(s)

ROESLER ET AL.

Examiner

A. Dexter Tugbang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-36 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/1/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Upon further consideration by the examiner, the previous restriction requirement (mailed on October 12, 2006) has been withdrawn. Claims 1 through 36 below were examined on their merits. There would be burdensome search to examine all of Claims 1 through 36.

### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because of the use of already implied phrases.

The examiner suggests replacing the term of "disclosed" (page 44, line 2) with -- provided--; and deleting the phrase of "the present invention" (page 44, line 10).

Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

4. Claims 1, 17, 29, 30 and 35 are objected to because of the following informalities.

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In each of the claims listed above, the language is awkwardly worded and the following changes are recommended to correct grammar. In no way do the changes suggested below affect the scope of the claimed invention.

In Claim 1: "the range" (line 8) should be changed to --a range--; "thereof," (line 8) should be replaced with --of the portion of the permanent magnets--; and "the first threshold" (line 14) should be changed to --a first threshold--.

In Claim 17: "the range" (line 10) should be changed to --a range--; and "the presence" (line 11) should be changed to --a presence--.

In Claim 29: --the-- should be added before "at least" (line 2).

In Claim 30: --the-- should be added before "at least" (line 2).

In Claim 35: "the range" (line 8) should be changed to --a range--; "thereof" (line 8) should be replaced with --of the portion of the permanent magnets--; and "the first threshold" (line 15) should be changed to --a first threshold--.

Appropriate correction is required.

***Allowable Subject Matter***

5. Claims 1 through 36 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter.

The prior art does not teach all of the limitations of the claimed invention as recited in each of independent Claims 1, 17, 32 and 35.

The closest prior art reference is cited to Perry et al (U.S. Patent 5,631,093). While Perry does teach providing a plurality of permanent magnets, which can be read as either a portion of

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permanent magnets and a remainder of permanent magnets, or alternatively as a first and set of permanent magnets, with north and south magnetic pole alignment. Additionally, Perry does teach permanent magnets with north and south poles and Curie temperatures (col. 3, lines 18-35).

However, Perry does not teach, *inter alia*, switching the north-south magnetic pole alignment of a portion of the permanent magnets by temporarily heating the portion of the permanent magnets to a temperature in a range of 0-200 deg. C below a Curie temperature of the portion of the permanent magnets (as recited in Claim 1).

Furthermore, Perry does not teach, *inter alia*, switching the north-south magnetic pole alignment of the second set of the permanent magnets by temporarily heating each permanent magnet in the second set of permanent magnets to a temperature in a range of 0-200 deg. C below the second Curie temperature in a presence of a magnetic field which is oppositely directed to the north-south magnetic pole alignment of the first and second sets of the permanent magnets (as recite in Claims 17 and 32).

Also, Perry does not teach, *inter alia*, switching the north-south magnetic pole alignment of a portion of the permanent magnets by temporarily heating the portion of the permanent magnets to a temperature in a range of 0-100 deg. C above a Curie temperature of the portion of the permanent magnets and below a Curie temperature for a remainder of the permanent magnets (as recited in Claim 35).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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8. This application is in condition for allowance except for the following formal matters:

To correct the informalities listed above with the specification and claims.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570.

The examiner can normally be reached on Monday - Friday 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**A. Dexter Tugbang**  
**Primary Examiner**  
**Art Unit 3729**

February 2, 2007

